

The effect of care dependency status of intensive care patients on their activities of daily living

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Abstract

Aim: Care dependency is defined as the patient's need for professional support, a decrease in meeting the self-care needs and his/her need for care according to dependency [1]. **Material and Method:** In this study, we aimed to investigate the effect of care dependency status of intensive care patients on their activities of daily living. The sample of the study consists of 75 intensive care patients hospitalized in internal medicine intensive care unit of a hospital. **Results:** Of the patients included in the study, 45.3% (n: 34) were females and 54.7% (n: 41) were males. The care dependency averages of ICU patients according to the age groups were found to be 63.18 ± 18.47 for the 20-40 age group, 52.70 ± 22.64 for the 41-60 age group, and 40.54 ± 21.35 for the 61-87 age group. The mean scores of the activities of daily living scale were found to be 14.36 ± 2.61 for the 20-40 age group, 12.45 ± 3.06 for the 41-60 age group, and 6.93 ± 1.83 for the 61-87 age group. **According to the results of the study, it was determined that intensive care patients were partially dependent on performing their activities of daily living. Discussion:** It was determined that care dependency of intensive care patients increases as their activities of daily living decrease. Care dependency levels of patients in meeting their activities of daily living can be evaluated by nurses regularly by using the scales, and individual interventions can be planned to reduce their levels of dependency.

Keywords

Intensive Care; Care Dependency; Activities of Daily Living

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Introduction

Intensive care patients are individuals, which are under life-threatening conditions, treated in the care centers, having numerous life-saving technological equipment, where a multi-disciplinary team approach is mandatory in order to get the highest level of benefit [2]. Nurses have an important role in the treatment and care of intensive care patients. The purpose of intensive care nursing is to optimize the physiological, psychological, emotional and social balance of the individual and to provide individual care that affects his or her life directly. The duration of hospitalization can be shortened by planning, implementation, and evaluation of the results of the individualized nursing care provided from the admission to discharge of the patient who is accepted in ICU for care and treatment. The nursing care should be planned and recorded in order to ensure the continuity of nursing care in the intensive care unit, to improve the quality of care and to manage care [3].

In order to provide nursing care systematically and in a planned manner, the Activities of Daily Living Model, which is a model that requires individual participation in care and focuses on individual-centered care, is used frequently by nurses in the care of intensive care patients. Nursing practices in the model of activities of daily living are covered within the scope of protection, relaxation, and approach to dependent functions [4].

The activities of daily living are all the activities that individuals perform consciously or unwittingly to improve the quality of life in their daily life, which also constitute the focal point of the model [5]. Roper et al. have observed the activities of living necessary in maintaining the daily life of people and determined the activities of daily living [6]. The main components of the Activities of Daily Living Model are the factors that affect ADL (physical, intellectual, emotional, social, cultural, moral, political and economic conditions), life expectancy, dependency-independence status and individuality [4].

The dependency-independence situation can change with the biophysiological, psychological and socioeconomic status of the individual. Being independent is of importance in every stage of life. However, negative factors such as disease, trauma, inadequate health behaviors and being in a foreign environment make people dependent on meeting activities of daily living [7]. Individuality in life is a concept that reflects the individual's dependency-independence status and lifestyle, which can change in accordance with individual's knowledge, values, faith and attitudes and ability to perform activities of daily living [8]. The basic human needs should be met in order to sustain human life physiologically [9]. The individual who cannot perform his/her activities of daily living continue his/her life depending partially or completely on others [8]. For this reason, daily living activities should be evaluated regularly by nurses, the dependency status of the individuals should be determined and the individuals' fulfillment of their daily living activities independently should be supported up to the tolerable point.

Care dependency is defined as the patient's need for professional support, a decrease in meeting the self-care needs and his/her need for care according to the dependency [1]. Chronic diseases, old age, sensory loss, changes in physical and psychological conditions can lead to an increased dependence of the individual in meeting his/her needs. At this point, professional

nursing care, which aims to help people and to undertake the responsibility of individuals, when they fail to meet their needs due to illness, is of paramount importance [9]. Determining the care needs and independence status of individuals will provide the nurse with the basic information when planning the individual nursing care, will increase the quality of nursing care given to the patient and will increase the communication between the team members and help to ensure the implementation of appropriate interventions [10].

Considering the above-mentioned opinions and research results, the importance of investigating the effect of activities of daily living on care dependence status in intensive care patients becomes prominent. In the literature, there are no studies investigating the effect of activities of daily living on care dependence status in intensive care patients. From this perspective, this study aims to investigate the effect of care dependency status of intensive care patients on their activities of daily living, considering that it will contribute to literature, nursing profession members and other health workers.

Material and Method

Research Type

This study was conducted with descriptive research design to investigate the care dependency levels of the internal medicine intensive care unit patients and their activities of daily living.

Research Place

The study was conducted in the internal medicine intensive care unit of a State Hospital.

Study Population and Sampling

The study population consisted of the patients hospitalized in the internal medicine intensive care unit of the state hospital between February 2017 and May 2017. The simple random sampling method was used between the dates specified. The sample of the study consisted of patients who met the research criteria and accepted to participate in the study. Seventy-five patients who met the inclusion criteria at these dates were included in the study. Patients aged over 18 years, who have no communication problems, who were conscious and agreed to participate were included in the study.

Variables of the Study

Care dependency levels of the patients and their activities of daily living constitute dependent variables of the study, and their sociodemographic characteristics (age, education level, gender) constitute the independent variables.

Data Collection Instruments

The data were collected through 'Patient Information Form', which included questions on sociodemographic characteristics and disease information of patients, the 'Care Dependency Scale', which is its Turkish validity and reliability study carried out by Hakverdioğlu Yönt et al. in 2010, and the 'Index of Independence in Activities of Daily Living' (ADL), developed by Katz et al. in 1963 to evaluate basic activities of daily living.

Patient Information Form

It was developed in line with the literature and includes questions on sociodemographic characteristics such as age, gender, education status and the current disease status, presentation to the clinic, hospitalized clinic and operation status [11].

Care Dependency Scale

In the study, this scale was used to determine the care dependency of the patients. The Care Dependency Scale has been developed by Dijkstra in the Netherlands in 1998, based on the human needs stated by Virginia Henderson, in order to assess the care dependence of patients. The Care Dependency Scale addresses various physical and psychological aspects and provides a comprehensive assessment of the patient’s care dependence [12]. The Turkish reliability and validity study of the Care Dependency Scale has been carried out by Hakverdioğlu Yönt et al. in 2010. In the reliability study, the test-retest reliability (kappa) value of the scale has been found between 0.53-1.00. The Cronbach’s alpha value of the scale was 0.91. As a result of the factor analysis applied to the scale, eigenvalue has been found as 7.293% [11]. The lowest and highest scores of the scale are 17 and 85 respectively. The higher scale scores indicate that the individual is independent in meeting his/her care needs, while the lower scale scores indicate that the individual is dependent on meeting his/her care needs.

Katz Index of Independence in Activities of Daily Living (ADL)

This scale has been developed to evaluate ADS by Katz et al. [13] in 1963. The Turkish translation and validity and reliability study of this scale have been performed by Pehlivanoğlu et al. [14]. Under each statement of the Activities of Daily Living Scale, there are response options to be marked as “dependent”, “partially dependent”, and “independent”. In the scoring of the ADL index, 3 points are given if the individual performs independently, 2 points are given if the individual gets assistance partially, and 1 point is given if the individual is unable to perform given activity. In the ADL scale, 0-6 points are evaluated as dependent, 7-12 points are accepted as partially dependent and 13-18 points are evaluated as independent, and dependency decreases as the score from the scale increases.

Application of the Research

The researchers visited the patients in the internal medicine intensive care unit, gave information about the research and obtained informed consent from the patients, who agreed to participate in the study. Following the consents, Patient Information Form, Care Dependency Scale, and ADS scale were applied to the patients. The forms used in data collection were filled by the researcher through face-to-face interviews with the patients. It took about 20-25 minutes to complete the forms due to the nature of the intensive care unit.

Evaluation of Data

The data obtained from the study were analyzed with SPSS (Statistical Package for Social Sciences) package program. As a result of normality tests, the data obtained were found to show a normal distribution, and therefore parametric techniques were used in statistical analysis. Independent samples

t-test and one-way analysis of variance test was used for the comparison of binary groups.

Ethical Aspect of the Study

Prior to conduct the study, the approval of the ethics committee was obtained. On the basis of the principle of voluntary participation, after explaining the purpose of the research, expectations, and legal rights to the patients in the study group, their written informed consents were obtained.

Limitations of the Study

The results of the study are valid only for the studied hospital.

Results

The research findings are presented in the following table.

Table 1. Distribution of Sociodemographic Data

Sociodemographic data	N	%
Gender		
Female	34	45.3
Male	41	54.7
Age		
20-40	11	14.7
41-60	20	26.7
61-87	44	58.7
Smoking		
Yes	40	46.7
No	35	33.3
Continuous Drug Use		
Yes	50	66.7
No	25	33.3
How do you feel when compared to your peers?		
I feel good	6	8.0
I feel a little better	37	49.3
I feel bad	31	41.3

Of the patients included in the study, 45.3% (n: 34) were females and 54.7% (n: 41) were males. It was determined that 14.7% of the patients were in the 20-40 age group, 26.7% were in the 41-60 age group, and 58.7% were in the 61-87 age group. It was determined that 66.7% (n: 50) of the patients used continuous medication and 66.7% (n: 40) of them were smoking. When the patients were asked about “How do you feel when compared to your peers?” 41.3% (n: 31) replied: “I don’t feel good”.

Table 2. Mean ADL scores and Mean Care Dependence Scale Scores according to Age Groups

Age Groups	Care Dependency			ADL		
	N	X ± SD	Min-Max	N	X ± SD	Min-Max
20-40	11	63.18 ± 18.47	32-85	11	14.36 ± 2.61	8-18
41-60	20	52.70 ± 22.64	17-85	20	12.45 ± 3.06	6-18
61-87	44	40.54 ± 21.35	17-85	44	6.93 ± 1.83	6-18

The care dependency averages of ICU patients according to age groups were found to be 63.18 ± 18.47 for the 20-40 age group, 52.70 ± 22.64 for the 41-60 age group, and 40.54 ± 21.35 for the 61-87 age group. The minimum value was 17 and the maximum was 85. The mean scores of the activities of daily

living scale were found to be 14.36 ± 2.61 for the 20-40 age group, 12.45 ± 3.06 for the 41-60 age group and 6.93 ± 1.83 for the 61-87 age group. The minimum value was 6 and the maximum was 18.

Table 3. Comparison of Care Dependency and ADL Scale Score Means by Age Groups

Age Group	Care Dependency				ADL			
	N	X ± SD	f	p	N	X ± SS	f	p
20-40	11	63.18 ± 18.47			11	14.36 ± 2.61		
41-60	20	52.70 ± 22.64	5.89	.004	20	12.45 ± 3.06	66.32	.000
61-87	44	40.54 ± 21.35			44	6.93 ± 3.88		

When the relationship between care dependency and ADLs was examined according to age groups of intensive care patients, a statistically significant difference was found between the groups ($p<0.05$), and a negative relationship was found between their ADLs and care dependence. Care dependencies of intensive care patients increase as their ADL decrease. In Table 3, the care dependency increases and their ADL gradually decrease as the age increases. In this case, a statistically significant relationship was found between ADL and care dependency ($p<0.05$).

Discussion

Of the patients included in our study, 45.3% (n: 34) were females and 54.7% (n: 41) were males. In a study conducted by Korhan et al. (2015) with intensive care patients, 44.8% of the patients were females and 55.2% were males [15]. The number of male patients in intensive care units was higher than that of female patients as supported by the literature. It was determined that 14.7% of the patients included in our study were in the 20-40 age group, 26.7% were in the 41-60 age group, and 58.7% were in the 61-87 age group. In a study conducted by Hindistan et al. (2009) with intensive care patients, 57.7% of the patients were 60 years of age and over [16]. In accordance with the findings we obtained, it can be said that the admissions to intensive care unit increase as the age increases. In our study, it was determined that 66.7% (n: 50) of the intensive care patients were on medication continuously. With increasing age, health problems increase and body functions weaken. Accordingly, individuals may use medication for their health problems. Medication use may cause individuals to be more dependent in their activities of daily living as they may have undesirable side effects. Individuals who do not have any disease and do not use regular medication are more independent in performing their activities of daily living. In a study conducted by Janssen et al., a significant relationship has been found between continuous medication and care dependency in individuals [17]. In a study by Tel et al. (2006), activities of daily living scores of individuals with chronic diseases and those using continuous medication have been found to be at the dependent level [18]. In our study, the total care dependency scale score of the individuals in the 61-87 age group was 40.54 ± 21.35 and it was found to be quite high. In the study, when the intensive care patients were asked about “How do you feel when compared to your peers?” 41.3% (n: 31) replied: “I don’t feel good”. It is supported in the literature

that the level of fulfillment of activities of daily living increases as the health and well-being perception of individuals increases [19]. In a study by Yildirim et al. (2007), individuals who were living in nursing homes and who considered their physical health as “good” have been found to have higher self-care ability scores than those who evaluated themselves as “moderate” and “poor” [20]. The results of our study showed that self-care power of the patients decreases and they become dependent as their health deteriorates and well-being perceptions decrease. According to the results, it was concluded that care dependence increases as age increases in intensive care patients. In their study, Turgay et al. (2017) reported that patients in the younger group were more independent than the older group [21]. In the DOPPS (Dialysis Outcomes and Practice Patterns Study) phase 4 (2009-2011) study, it has been determined that patients who were more functionally independent were younger [22]. As the age advances, significant deficiencies in physical, mental and cognitive functions emerge, activities of daily living become limited and even increasingly hampered [23]. Thus, individuals become more dependent on performing their activities of daily living. In a study by Taşdelen and Ateş (2012) conducted with home care patients and in a study by Mollaoğlu et al. (2011) conducted with patients with stroke, it has been concluded that patients need for caregivers increase as their activities of the daily living decrease [24,25].

Conclusion and Recommendations

According to our findings, care dependency increases and activities of daily living decrease with increasing age, and there is a negative relationship between activities of daily living and care dependence. It is essential for the continuity of life that the basic human needs of the individual are met by her/him or someone else. An inadequacy/deficiency in any field naturally affects another area in a human, from a holistic perspective. The majority of patients in ICUs may be partially or totally dependent on others in meeting basic care needs. In order to provide high-quality care to the patients in the intensive care unit, the nurses and other health workers responsible for the patient’s care should be able to consider the patient as a whole. It is believed that nurses who are primarily responsible for the patient’s care should evaluate the patient’s basic needs for life and his/her level of dependence and guide nursing care accordingly, before planning the patient care. It is also thought that this study will constitute a basis for the further studies conducted on care dependency of patients as well as forming a basis for determining the number of nurses in clinics through determining the symptom burden of the patients in terms of their care dependency statuses.

Scientific Responsibility Statement

The authors declare that they are responsible for the article’s scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with

the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

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Conflict of interest

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